



MACTEC

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December 14, 2007

Mr. Michael B. Davis
RCRA Corrective Action and Permits Branch
Air & Waste Management Division
United States Environmental Protection Agency
Region VII
901 North 5th Street
Kansas City, Kansas 66101

**RE: Defining Area of Property Subject to Restrictions for the Vapor Intrusion Pathway
Former Sheller Globe Facility
3200 Main Street, Keokuk, Iowa
EPA RCRA ID # IAD005136023
MACTEC E&C Project No. 3250-04-5089.02**

Dear Mr. Davis:

The enclosed presents the responses to comments on above-referenced document for the Former Sheller Globe Facility, submitted by USEPA on November 5, 2007. The responses to comments reflect the discussions and agreements reached during the December 5, 2007 teleconference between USEPA and MACTEC. Upon your approval of these comment responses, MACTEC will revise the subject document for submittal to you.

Please feel free to call me if you have any questions or would like to discuss the comment responses further.

Sincerely,
MACTEC Engineering and Consulting, Inc.

Jay Peters by BBR with permission

Jay Peters
Principal Scientist

Dennis Brinkley

Dennis Brinkley, P.E.
Principal Engineer

cc: Shawn McAfee, Metzler
Dale Guariglia, Bryan Cave
MACTEC Project File [P:\W8-RISK\St Louis\Metzler Auto\RTC Cover Ltr.doc]

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RCRA



RESPONSE TO COMMENTS

October 2007, Vapor Intrusion Screening
Former Sheller Globe Facility
3200 Main Street
Keokuk, Iowa
EPA RCRA ID No. IAD005136023

Review Comments Provided By: United States Environmental Protection Agency
Region VII, Kansas City, Kansas
Dated November 5, 2007

General Comments

Comment 1) The groundwater buffer contour should represent a 100-foot buffer based on sampling locations with demonstrated contaminant concentrations below screen criteria. Please also be aware that contaminant concentrations in proximal fill and till monitoring wells may not represent a continuous plume. For example, monitoring well MW-13A (shallow well) should not be used to interpolate the leading edge of contamination observed in MW-13 (deeper well).

Response: The following response is applicable to General Comments 1 through 4.

Additional groundwater data for wells located north of MW-7/MW-8 have been identified. This groundwater data, included as Attachment A to this response to comment letter, shows that VOCs were not detected in groundwater wells OP-1, OP-2, and OP-3, located to the north of MW-7/MW-8. Therefore, these wells provide a boundary on the extent of impact to the north of MW-7/MW-8. Similarly, well MW-17, located downgradient of MW-7, has shown non-detects for VOCs in recent rounds of groundwater sampling. The concentrations of VOCs in wells MW-7 and MW-8 are only marginally higher than vapor intrusion screening values. Collectively, this indicates that groundwater in the vicinity of MW-7/MW-8 does not represent a substantial source area of VOC impact. As discussed with USEPA during a teleconference on December 5, 2007, well locations OP-1 and MW-17 may be used to establish the restricted zone on the north and northwestern sides of the groundwater VOC impact. As discussed with USEPA during the December 5, 2007 teleconference call, wells MW-12, MW-6a/6B, MW-16, and MW-18 will be used to establish the restricted zone on the western and southern sides of the groundwater plume.

The attached figure identifies the restricted zone. The perimeter of the zone is based on:

- 100-feet from well MW-6A on the eastern side. This well is non-detect for VOCs. The facility building is upgradient of groundwater VOC impact.
- The property line on the southeastern and southern sides. The property line is separated from the area of groundwater impact with concentrations in excess of vapor intrusion screening values by monitoring wells that are non-detect for VOCs.
- 100-feet from well MW-17 on the western side. This well is non-detect for VOCs. However, because the groundwater movement is toward the southwest, a 100-foot buffer zone is established to ensure that residential structures would not be placed within the potential convective zone for vapor intrusion.
- The location of OP-1 on the northern side. Well OP-1 is non-detect for VOCs, and is located more than 100 feet upgradient of wells MW-7 and MW-8. Additionally, wells OP-2 and OP-3 are located north of OP-1 and were non-detect for VOCs.



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The report will be revised to include a chem.-box figure for groundwater similar to Figure 2. In addition, the existing Figure 3 will be revised to show monitoring wells with concentrations greater than screening values, less than screening values, and non-detects. This will form the basis of the area to which the restrictive covenant will apply. The existing Figure 4 will be revised to show the expanded area of the restricted zone, as depicted in the attached figure.

Comment 2) Section 5, Q4, of the *OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils* [EPA 530-D-02-004], advises that shallow groundwater sources and building construction are key factors that influence the use of generic groundwater attenuation factors. The relatively shallow depth to groundwater at this facility must be considered when delineating areas of the property that are suitable for any use without restrictions. As such, interpolating the leading edge of contamination without complete delineation is not acceptable. A practical approach should be employed to define areas of the property that are not susceptible to vapor intrusion and are suitable for any use without restrictions, based on a complete delineation of groundwater contamination, knowledge of current property use and environmental conditions, and reasonably anticipated future property uses. Please remember that restrictive covenants can be revised in the future if anticipated property uses change.

Response: Please refer to the response to General Comment number 1.

Comment 3) The lateral extent of contamination has not been delineated north and west of MW-7 and MW-8. If Metzler wishes to demonstrate that these areas of the property should not be subject to land use controls under current site conditions, these wells should be redeveloped and resampled to determine if concentrations have fallen below detectable levels since the last sampling event. Otherwise, additional groundwater monitoring locations should be proposed for EPA approval to delineate the extent of contamination of groundwater.

Response: Please refer to the response to General Comment number 1.

Comment 4) Figures similar to Figure 2 should be provided illustrating the distribution of groundwater contamination observed in fill and till monitoring wells.

Response: Please refer to the response to General Comment number 1.

Specific Comments

Comment 5) Figure 2 is not legible due the size, and the supplemental enlarged figure is not legible due to the print quality. Please provide a clearly legible figure illustrating the distribution of contamination in soil.

Response: A larger copy of the figure will be included in the revised report.

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Comment 6) Section 3.0, Page 2. The fourth bulleted item on this page identifies "contact" with shallow groundwater as a potential exposure pathway during intrusive activities such as excavation and utility work. This discussion should clarify that relevant exposure pathways include dermal contact with soil and groundwater, incidental ingestion of soil and groundwater, and inhalation of volatilized contaminants.

Response: The bullet will be revised as follows: "~~contact~~ incidental ingestion of, dermal contact with, and vapor inhalation of, shallow contaminated groundwater during intrusive excavation activities"

Comment 7) Section 3.0, Page 2. The last paragraph on this page discusses the source removal action conducted pursuant to the Order, and includes the statement "[t]he soil removal action was designed to result in residual VOC concentrations in soil and groundwater that did not pose an unacceptable risk to commercial/industrial workers who may be exposed [to contamination at the site]." Please be aware that the source removal action did not result in contaminant concentrations in soil and groundwater below levels which are demonstrated to be protective of utility workers engaged in intrusive activities, or some of the other exposure scenarios identified in the preceding paragraph of that Section. Monitored natural attenuation was selected as a fundamental element of the final remedy to ensure that residual contamination is reduced to levels appropriate for anticipated property uses and exposure scenarios. The text in this Section should be revised accordingly.

Response: The first sentence of this paragraph will be removed from the report.

Comment 8) Section 4.2.1, Page 5. The last sentence in the first paragraph on this page suggests that because limited data is available regarding vadose soil contamination south of the retaining wall, "it is assumed that no subsurface volatile sources are present in soil on the south side of the retaining wall." There is insufficient data presented to justify this assertion. Please provide sampling data to demonstrate the absence of vadose soil contamination south of the retaining wall, or omit the referenced text.

Response: The last sentence of this paragraph will be removed from the report.

Comment 9) Section 4.2.1, Page 6. The last paragraph in this Section discusses comparisons of soil sampling results to EPA Region 9 Preliminary Remediation Goals (PRGs). Whenever benchmark criteria are cited or used to support the conclusions of the screening assessment, a summary table should be included to present these criteria and the comparison with site data.

Response: A summary table that compares VOC detections to PRGs will be provided in the revised report.

Comment 10) Section 4.2.2, Page 7. The second paragraph on this page references Figure 2 for an illustration of the buffer zone around monitoring wells. This information is presented on Figure 3.

Response: The citation will be corrected.



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Comment 11) Section 4.2.2, Page 7. The third paragraph on this page states that concentrations of VOCs observed in monitoring wells downgradient of MW-10, MW-11R, and MW-13 are "generally" below detectable levels. Please clarify what is meant by the term "generally".

Response: The term 'generally' referred to the observation that the majority of VOCs in samples were non-detect, but some were reported at 'J' qualified concentrations near the detection limit. The term 'generally' will be removed and the text will be edited to definitively state whether VOCs were or were not detected.

Comment 12) Section 4.2.2, Page 7. The fourth paragraph on this page discusses the failure to delineate the limits of groundwater contamination north and west of MW-7 and MW-8, and suggests that several factors should be considered when evaluating the significance of this failure. The text of the paragraph and the first bulleted item suggest that it is important to consider groundwater flow in consideration of potential vapor intrusion concerns. Vapor migration does not follow groundwater flow. The conditions and mechanisms that influence vapor movement are independent from the movement of groundwater. The statement is misleading and should be removed.

Response: The statement concerning vapor movement in the direction of groundwater flow will be removed.

Comment 13) Section 4.2.2, Page 8. This section discusses utilities and other features representing potential preferential pathways for vapor migration. Please provide a figure illustrating the types and locations of all preferential pathways (e.g., fractures, utilities, fill material, subsurface drains) which may be expected to have high gas permeability.

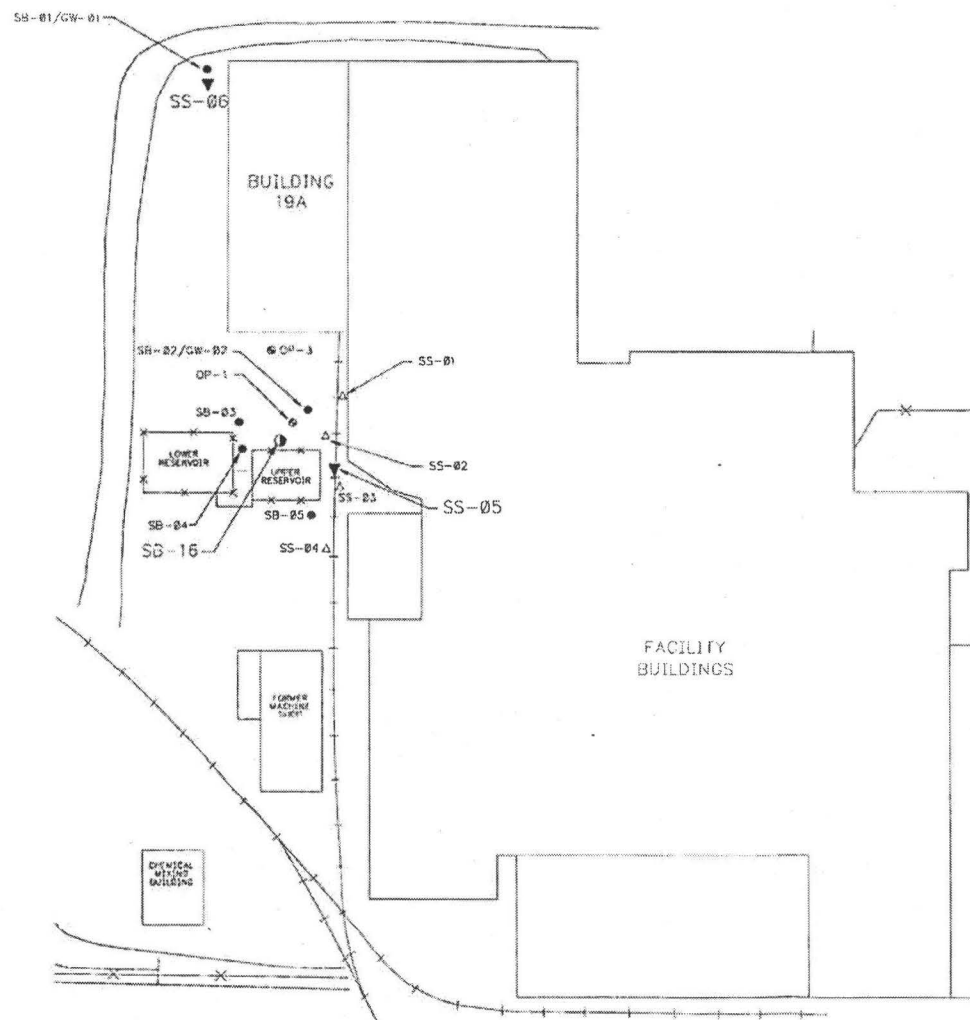
Response: A figure will be provided that illustrates the locations of features which may contribute to high gas permeability.



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ATTACHMENT A



DRAWN: D.R.T.	DATE: 03/08/95	PROJECT NUMBER	DWG. NO.
CHECKED: <i>WES</i>	DATE: 3/4/95	91C7343-1	3-6

TABLE 3-7
INVESTIGATION OF APPARENT SPILL AREAS
 Concentrations of Compounds Detected - Groundwater and Groundwater Grab Samples

Parameter	Maximum Contaminant Levels (µg/L)	Draft RCRA Subpart S Criteria (µg/L)	Sample ID					
			May 93				Feb 95	
			GW-01	GW-02	OP-1	OP-3	OP-1	OP-3
Volatiles (µg/L)								
Acetone	NE	4000	10 U	15	10 U	10 U	10 U	NA
Semi Volatiles (µg/L)								
Carbazole	NE	NE	10 U	40 R	10 U	10 R	13 J	10 U
Dissolved Metals (µg/L)								
Arsenic	50	NE	5 U	10 U	5 U	22 J	NA	NA
Barium	2000	NE	88	44	39	28	NA	NA
Chromium	100	NE	10 U	82	10 U	10 U	NA	NA
PCBs (mg/kg)								
	NE	NE	NA	NA	NA	NA	NA	1 U
Total Metals (µg/L)								
Arsenic	50	NE	85 J	150 J	5 U	21 J	NA	NA
Barium	2000	NE	680	2400	850	400	NA	NA
Cadmium	5	NE	5.7	5 U	5 U	5 U	NA	NA
Chromium	100	NE	200	390	14	24	NA	NA
Lead*	15	NE	68	450	10 U	59	NA	80
Mercury	2	NE	0.54	0.98	0.2 U	0.2 U	NA	NA
Others (µg/L)								
Extractable Petroleum Hydrocarbons	NE	NE	300	31000	1100	400	NA	NA

Notes: U : Not Detected.

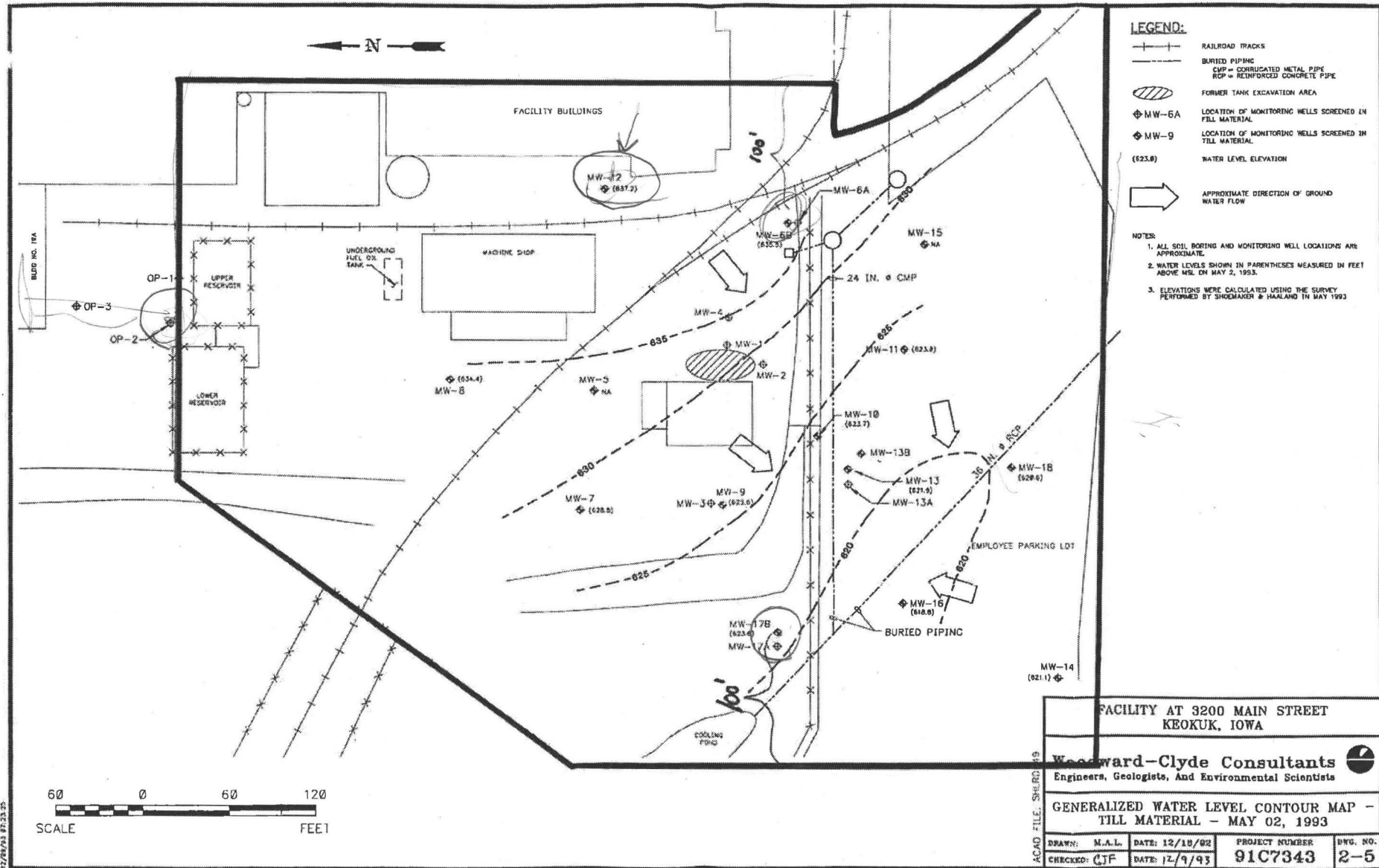
J : Estimated Value.

NA : Not Analyzed.

NE : Not Established.

R : Rejected

*: MCL for lead represents treatment technique action level.



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